ABSTRACT OF THE DISCLOSURE

A process for controlling a switched full-duplex Ethernet type communication network including at least one source subscriber equipment and at least one destination subscriber equipment connected to each other through at least one physical link through at least one switch and at least one virtual link, which is the conceptual representation of a link from a source equipment to at least one destination equipment. In the process each equipment transmitting Ethernet frames segregates between virtual links and allocates a passband for each virtual link and multiplexes virtual links on the physical link output from this equipment. Each transmitted frame has a field that identifies the virtual link to which it belongs.